No. 200800039

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seminis Vegetable Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'PICUS'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of December, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

BUREAU OF ENGRAVING AND PRINTING

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Seminis Vegetable Seeds, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
XP 01429864

3. VARIETY NAME
PICUS

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
2700 Camino del Sol
Oxnard, CA 93030-7967

5. TELEPHONE *(include area code)*
(805) 647-1572

6. FAX *(include area code)*
(805) 918-2545

FOR OFFICIAL USE ONLY

PVPO NUMBER
#200800039

FILING DATE
Nov 29, 2007

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
California

9. DATE OF INCORPORATION
4 June 1962

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 4,382.00
DATE 11-29-2007

CERTIFICATION FEE:
$ 768.00
DATE 10/21/08

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Carol Miller
Seminis Vegetable Seeds, Inc.
37437 State Hwy 16
Woodland, CA 95695

Sara Boeke
Seminis Vegetable Seeds, Inc.
P.O. Box 97, NL-6700 AB
Wageningen, Netherlands

11. TELEPHONE (Include area code)
(530) 669-6274

12. FAX (Include area code)
(530) 669-6112

13. E-MAIL
carol.l.miller@seminis.com

14. CROP KIND *(Common Name)*
Tomato

16. FAMILY NAME *(Botanical)*
Solanaceae

15. GENUS AND SPECIES NAME OF CROP
Lycopersicon esculentum

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (***OPTIONAL***)
☐ YES ☐ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☑ Exhibit F. Declaration Regarding Deposit
g. ☐ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☑ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☑ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☑ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☑ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☑ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☑ YES ☐ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Carol L. Miller			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Carol L. Miller			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
PVP Specialist	28-NOV-07		

(See reverse for instructions and information collection burden statement)

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for $4,382 ($518 filing fee and $3,864 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice).* **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of $768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

Plant Variety Protection Office
Telephone: (301) 504-5518 **FAX:** (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

#200800039

SPECIFIC INSTRUCTIONS:
To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

First Sales: United States 01-Dec-06; Canada 01-Dec-06

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

US Provisional Patent Application No. 60/991,530 Entitled "Tomato Variety PICUS"

U.S. Patent Application (in process) will be filed prior to November 30, 2007.

per correspondence Aug 26, 2008

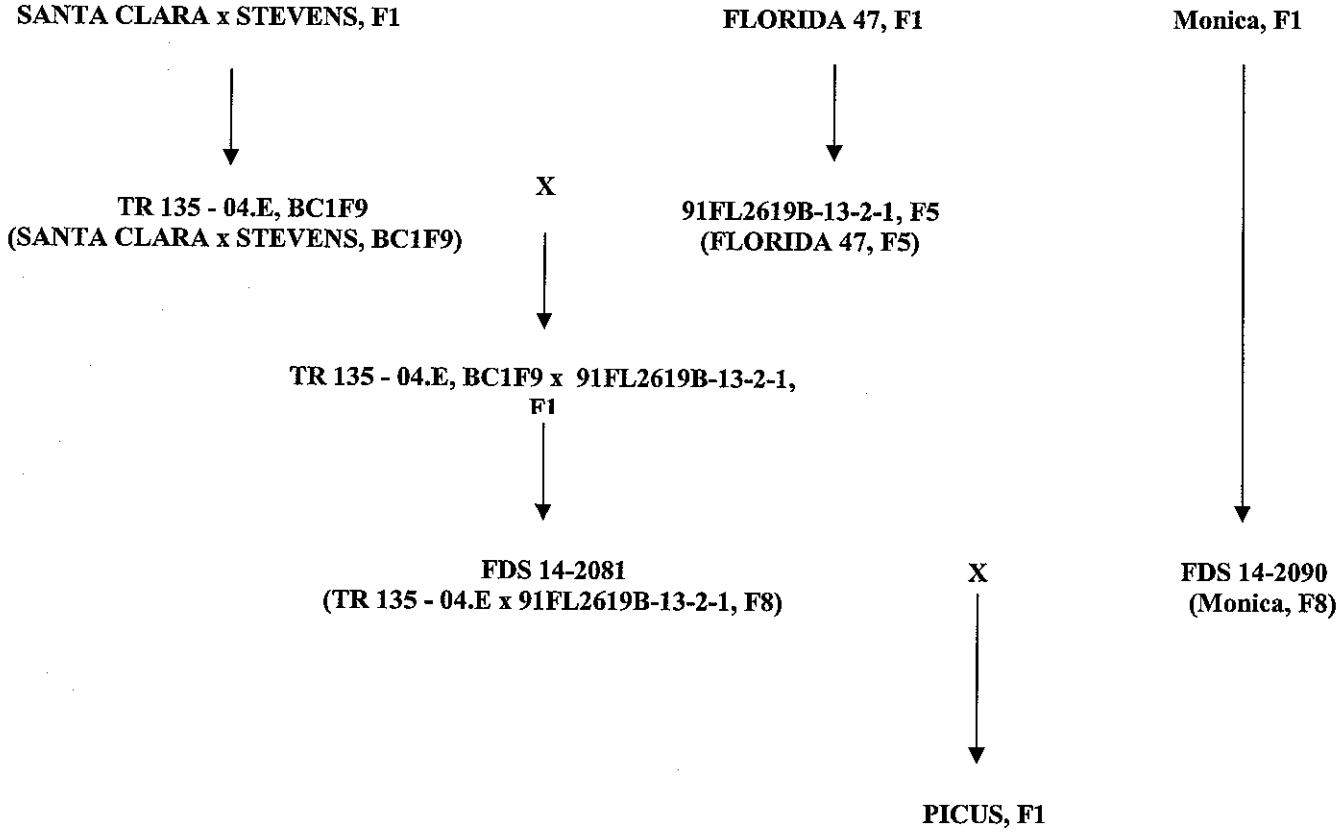
LMC 9-26-2008

ST-470 (02-06) designed by the Plant Variety Protection Office using Word 2003.

EXHIBIT A #200800039

Origin and Breeding History of PICUS, Tomato

Tomato hybrid PICUS was developed by crossing FDR 14-2081 (seed parent) times FDR 14-2090 (pollen parent).



PICUS is a fresh market roma tomato hybrid variety with large, blocky roma-shaped fruit developed for the "Saladette" segment. The determinate type plants are medium-large sized, vigorous growing, and set fruit all the way to the top of the plant. Selection criteria for PICUS included plants which produce large, elongated cylindrical red fruit which set well in hot temperatures. resistance to Tomato Spotted Wilt Virus (TSWV), and plants that grow well in field conditions as found in the Eastern United States.

From observations made during the 2006 and 2007 growing seasons, PICUS was found to be uniform and stable within commercially acceptable limits. As is true with other tomato hybrids, a small percentage of variants can occur within commercially acceptable limits for many characteristics during the course of repeated multiplication. No genetic variants are known to occur and, to date, this hybrid has been observed to be completely uniform and stable for at least two generations.

EXHIBIT B #2008000039

Statement of Distinctness for Tomato, PICUS

PICUS is described as a determinate Tomato Spotted Wilt Virus resistant Fresh Market Tomato hybrid in the 'Saladette' segment. The novelty of PICUS is that it is good determinate fresh market tomato hybrid resistance to Tomato Spotted Wilt Virus with elongated fruit shape. It is vigorous and allows for healthy growth in field conditions as found in the Eastern U.S.A.

To our knowledge, the variety most closely resembling the candidate variety is FLORIDA 7655. The characteristic that most readily distinguishes the two varieties, but may not be limited to, include:

- **Fruit Shape:** the fruit of PICUS are elongated, cylindrical and blocky, and the blossom end is slightly tapered and flattened, whereas the fruit of FLORIDA 7655 are more elongated and cylindrical, and the ends are more tapered and slightly pointed (**See Photos 1 and 2**).

Photo 1:
The fruit of PICUS have a shape that is elongated, cylindrical and blocky, and the blossom end is slightly tapered and flattened.
(Photo Source: Charles W. Fowler, Plant Breeder)

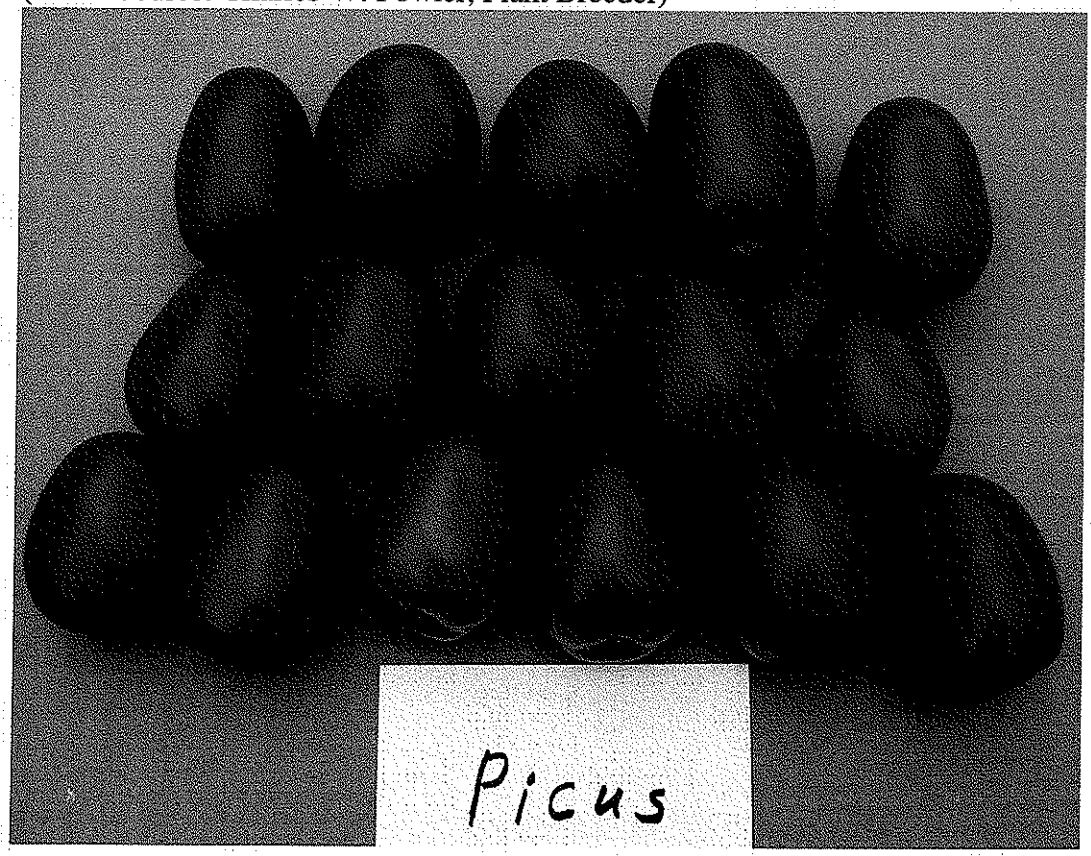
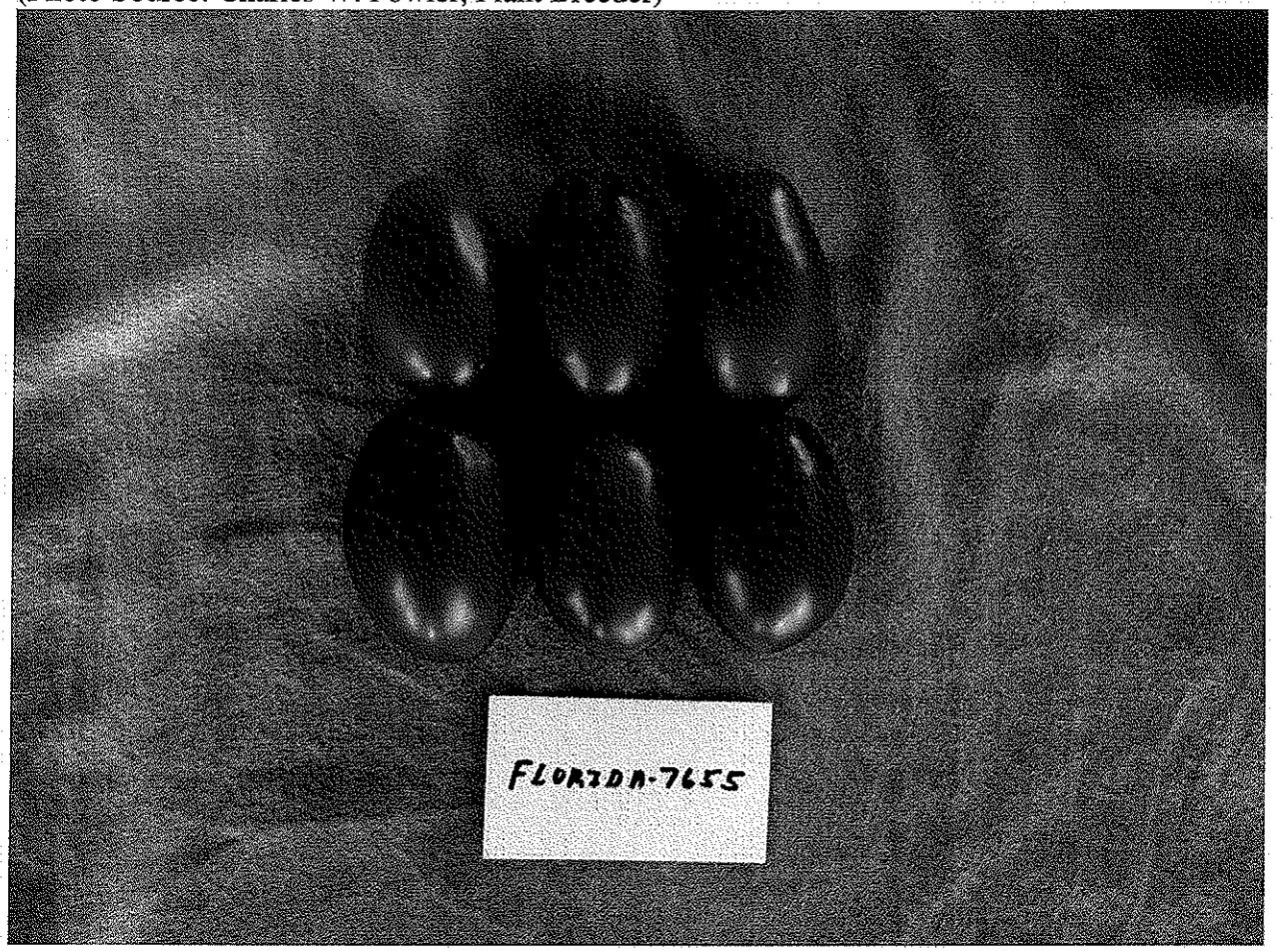


Photo 2:
The fruit of FLORIDA 7655 have a shape that is elongated and cylindrical, and the ends are tapered and slightly pointed.
(Photo Source: Charles W. Fowler, Plant Breeder)



- **Chemistry and Composition of full ripe fruits:** PICUS has a lower titratable acidity (0.306 vs. 0.354), lower total solids (4.34 vs. 5.17) and lower 'BRIX ' percentage (3.76% vs. 4.36%) than FLORIDA 7655.

Report Generated for
Wayne Fowler
Seminis Vegetable Seeds
Naples, FL

Report Generated By
Seminis Vegetable Quality Research Lab
37437 State Highway 16
Woodland, California,
95695

Lab Request ID/Name:	V000000046	WF1081
Lab Set ID:	V000000050	
Notebook:		

Date of Receipt: 11/06/07 #2008000039
Date Requested:
Sample Type: Tomato - Fresh Market

Results relate only to those items being tested.

Rep	%TA Citric Acid Equiv (Anh)		Total Solids %		Brix %		pH	
	Picus	Florida 7655	Picus	Florida 7655	Picus	Florida 7655	Picus	Florida 7655
R1	0.3008	0.38656	4.32	5.42	3.80	4.50	4.30	4.29
R2	0.31296	0.37504	4.31	5.31	3.76	4.52	4.31	4.29
R3	0.28672	0.3424	4.18	5.03	3.65	4.21	4.34	4.32
R4	0.30016	0.30656	4.35	5.11	3.79	4.34	4.38	4.36
R5	0.28416	0.3328	4.35	5.02	3.66	4.36	4.31	4.41
R6	0.2976	0.36352	4.27	4.90	3.80	4.10	4.32	4.30
R7	0.3488	0.37376	4.38	5.41	3.79	4.48	4.29	4.28
R8	0.32832		4.55		3.87		4.35	
R9	0.2912		4.34		3.68		4.35	
AVG	**0.306**	**0.354**	**4.34**	**5.17**	**3.76**	**4.36**	**4.33**	**4.32**

Refer to Table 1 for raw lab data.

Table 1

Lab Request ID/Name: V000000046 WF1081
Lab Set ID: V000000050
Date of Receipt: 11/06/07

Variety	Gen	Plot	Field Rep	Lab Rep	Sample Size Count	Unit Weight Grams	Avg Weight Grams	Total Solids %	Brix %	pH	%TA Citric Acid Equiv (Anh)	TA7 milli moles H+/100g	Titr Acdty milli moles H+/100g	Total Organic Acid Estimate micro moles H+/gram	Customer ID_1	SPR ID_1	Sample ID_1
UC82	Inbred	3326	1	1	10	75.0		4.31	3.75	4.15	0.3424	4.8389	5.35	25.6	27978	V000000116368	V0000007997
				2	10	70.7		4.20	3.41	4.24	0.31936	4.4303	4.99	24.65	27978	V000000116341	V0000007998
				3	10	71.4		4.34	3.64	4.24	0.31552	4.3964	4.93	24.39	27978	V000000116342	V0000007999
UC82	Inbred	3326	2	1	10	83.1		4.50	3.80	4.19	0.35136	4.927	5.49	26.03	27977	V000000116369	V0000008000
				2	10	88.5		4.37	3.68	4.24	0.31744	4.4317	4.96	24.14	27977	V000000116338	V0000008001
				3	10	84.6		4.53	3.81	4.13	0.35136	4.9371	5.49	25.43	27977	V000000116339	V0000008002
UC82	Inbred	3326	3	1	10	83.0		4.18	3.55	4.13	0.37888	5.3627	5.92	27.67	27976	V000000116367	V0000007994
				2	11	76.4		4.43	3.59	4.15	0.35456	5.0076	5.54	26.15	27976	V000000116335	V0000007995
				3	10	79.1		4.70	3.94	4.08	0.4032	5.7478	6.3	29.05	27976	V000000116336	V0000007996
Picus	F1	3327	1	1	7	105.6		4.32	3.80	4.30	0.3008	4.1291	4.7	23.21	27980	V000000116371	V0000008006
				2	8	108.9		4.31	3.76	4.31	0.31296	4.2965	4.89	24.58	27980	V000000116347	V0000008007
				3	8	120.5		4.18	3.65	4.34	0.28672	3.9069	4.48	22.75	27980	V000000116348	V0000008008
Picus	F1	3327	2	1	10	119.2		4.35	3.79	4.38	0.30016	4.0608	4.69	23.67	27981	V000000116372	V0000008009
				2	9	120.9		4.35	3.66	4.31	0.28416	3.8225	4.44	21.37	27981	V000000116350	V0000008010
				3	9	108.8		4.27	3.80	4.32	0.2976	4.0747	4.65	23.32	27981	V000000116351	V0000008011
Picus	F1	3327	3	1	12	99.9		4.38	3.79	4.29	0.3488	4.823	5.45	27.38	27979	V000000116370	V0000008003
				2	12	121.5		4.55	3.87	4.35	0.32832	4.5016	5.13	26.38	27979	V000000116344	V0000008004
				3	12	115.2		4.34	3.68	4.35	0.2912	3.9613	4.55	23.13	27979	V000000116345	V0000008005
					87	1020.4	11.7										
Florida-7655	Inbred	3321	1	1	6	85.3		5.42	4.50	4.29	0.38656	5.3114	6.04	30.92	27985	V000000116374	V0000008851
				2	7	81.7		5.31	4.52	4.29	0.37504	5.1369	5.86	29.66	27985	V000000116361	V0000008852
Florida-7655	Inbred	3321	2	1	11	82.9		5.03	4.21	4.32	0.3424	4.6851	5.35	27.3	27984	V000000116373	V0000008848
				2	12	78.3		5.11	4.34	4.36	0.30656	4.1942	4.79	24.92	27984	V000000116358	V0000008849
				3	9	87.4		5.02	4.36	4.41	0.3328	4.5077	5.2	27.6	27984	V000000116359	V0000008850
Florida-7655	Inbred	3321	3	1	7	82.3		4.90	4.10	4.30	0.36352	5.0138	5.68	28.95	27986	V000000116376	V0000008855
				2	8	76.1		5.41	4.48	4.28	0.37376	5.142	5.84	28.97	27986	V000000116363	V0000008856
					60	573.9	9.6										
FDS-14-2081	Inbred	3324	1	1	11	83.4		4.25	3.82	4.43	0.2944	3.9079	4.6	23.09	27987	V000000116378	V0000008860
				2	10	85.4		4.33	3.72	4.44	0.2912	3.8247	4.55	22.81	27987	V000000116365	V0000008861
				3	9	89.5		4.42	3.86	4.42	0.28352	3.7046	4.43	21.98	27987	V000000116366	V0000008862
FDS-14-2081	Inbred	3324	2	1	7	81.3		4.64	3.86	4.49	0.26944	3.5047	4.21	21.86	27983	V000000116377	V0000008857
				2	7	86.6		4.56	3.91	4.37	0.30784	4.1645	4.81	24.29	27983	V000000116355	V0000008858
				3	8	76.9		4.56	3.81	4.46	0.29376	3.8073	4.59	23.01	27983	V000000116356	V0000008859
FDS-14-2081	Inbred	3324	3	1	7	98.3		5.26	4.27	4.26	0.41984	5.7664	6.56	32.44	27982	V000000116375	V0000008853
				2	8	76.0		4.70	3.93	4.31	0.35072	4.797	5.48	27.32	27982	V000000116353	V0000008854

#200803693

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY
TOMATO (*Lycopersicon esculentum* Mill.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Seminis Vegetable Seeds, Inc.		Florida 7655
ADDRESS *(Street and No. or RD No., City, State, Zip Code, and Country)*		**PVPO NUMBER**
2700 Camino del Sol Oxnard, CA 93030		#200800039

Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeros when necessary (e.g., 0 9 or 0 8 1, etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicated by check whether trial data are from ~~green house~~ ___ or field (X) planting. Trials ~~direct-seeded~~ ___ or transplanted (X) staked ___ ~~or unstaked~~ ___. Give locations and dates of seeding and transplanting here:

Tifton, GA: transplanting date 10-Aug-07.

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST. IF AT ALL POSSIBLE, ENTER THE NUMBER OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.

1 = Ace 55 VF
2 = Campbell 37
3 = Chico III
4 = Flora Dada
5 = Florida MH-1
6 = Heinz 1350
7 = Homestead 24
8 = Marglobe
9 = Murietta
10 = New Yorker
11 = Ohio MR-13
12 = Red Cherry Large
13 = Red Rock
14 = Roma VF
15 = Rutgers
16 = Sunray
17 = Tropic
19 = VF 134
20 = US 28
21 = VF 145 B 7879
22 = Other (Specify) _____

1. SEEDLING

1 Anthocyanin in hypocotyl of 2 – 15 cm seedling: 1 = Absent 2 = Present

1 Habit of 3 – 4 week old seedling: 1 = Normal 2 = Compact

2. MATURE PLANT (at maximum vegetative development)

085 CM Height

2 Growth: 1 = Indeterminate 2 = Determinate

2 Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic

2 Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

2 Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

3. STEM

2 Branching: 1 = Sparse ('Brehm's Solid Red', 'Fireball') 2 = Intermediate ('Westover') 3 = Profuse ('UC 82')

1 Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent

3 No. of nodes between first inflorescence: 1 = 1–4 2 = 4–7 3 = 7–10 4 = 10 or more

1 No. of nodes between early (1st – 2nd, 2nd – 3rd) inflorescences. 1 No. of nodes between later developing inflorescences.

2 Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or wooly

4. LEAF (mature leaf beneath the 3rd inflorescence)

1 Type: 1 = Tomato 2 = Potato ('Trip-L-Crop') 2 Morphology (choose illustration at the end of this form that is most similar)

2 Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, sps. Toward base

2 Marginal rolling or wiltiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong

3 Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season

2 Surface of major leaflets: 1 = Smooth 2 = Rugose (bumpy or veiny)

1 Pubescence: 1 = Smooth (no long hairs) 2 = Normal 3 = Hirsute 4 = Wooly

5. INFLORESCENCE (make observations on 3rd inflorescence)

1 Type: 1 = Simple 2 = Forked (2 major axes) 3 = Compound (much branched)

5.4 Number of flowers in inflorescence. Average

2 Leafy or "running" inflorescences: 1 = Absent 2 = Occasional 3 = Frequent

6. FLOWER

1 Calyx: 1 = Normal, lobes awl-shaped 2 = Macrocalyx, lobes large, leaflike 3 = Fleshy

1 Calyx-lobes: 1 = Shorter the corolla 2 = Approx. equalling corolla 3 = Distinctly longer than corolla

1 Corolla color: 1 = Yellow 2 = Old gold 3 = White or tan

2 Style pubescence: 1 = Absent 2 = Sparse 3 = Dense

1 Anthers: 1 = All fused into tube 2 = Separateing into 2 or more groups at anthesis

1 Fasciation (1st flower of 2nd or 3rd inflorescence): 1 = Absent 2 = Occasionally present 3 = Frequently present

7. FRUIT (3rd fruit of 3nd or 3rd cluster) For the first 5 characters below, match your variety with the most similar illustration on pages at the end of this form.

7 Typical fruit shape 1 Shape of transverse section 2 Shape of stem end

4 Shape of blossom end 2 Shape of pistil scar

2 Abscission layer: 1 = Present (pedicellate) 2 = Absent (jointless)

2 Point of detachment of fruit at harvest: 1 = At pedicel joint 2 = At calyx attachment

10.85 MM length of dedicel (from joint to calyx attachment)

75.3 MM length of mature fruit (stem axis) ____ MM length, check var. no. ____

48.3 MM diameter of fruit at widest point 75.3 MM diameter, check var. no. ____

94.5 G weight of mature fruit 48.4 G weight, check var. no. ____

1/2 No. of locules: 1 = Two 2 = Three and four 3 = Five or more = 2-3 locules

per correspondance Sept 23, 2008 LMC 9-27-2008

1 Fruit surface: 1 = Smooth 2 = Slight ly rough 3 = Moderately rough or ribbed

1 Fruit base color (mature-green stage):
1 = Light green ('Lanai', 'VF 145-F5') 2 = Light gray-green 3 = Apple or medium green ('Heinz 1439 VF') 4 = Yellow green 5 = Dark green

1 Fruit pattern (mature-green stage): 1 = Uniform green 2 = Green-shouldered 3 = Radial stripes on sides of fruit

7. FRUIT (continued)

N/A Shoulder color if different from base: 1 = Dark green 2 = Grey green 3 = Yellow green

5 Fruit color, full-ripe: 1 = White 2 = Yellow 3 = Orange 4 = Pink 5 = Red 6 = Brownish 7 = Greenish 8 = Other (specify) _____

3 Flesh color, full-ripe: 1 = Yellow 2 = Pink 3 = Red/Crimson 4 = Orange 5 = Other (specify) _____

1 Flesh color: 1 = Uniform 2 = With lighter and darker areas in walls

3 Locular gel color of table-ripe fruit: 1 = Green 2 = Yellow 3 = Red

___ Ripening: 1 = Blossom-to-stem end 2 = Uniform (no information)

1 Ripening: 1 = Inside out 2 = Uniformly 3 = Outside in

1 Stem scar size: 1 = Small ('Roma') 2 = Medium ('Rutgers') 3 = Large

2 Core: 1 = Coreless (absent or smaller than 6x6 MM) 2 = Present

2 Epidermis color: 1 = Colorless 2 = Yellow

1 Epidermis: 1 = Normal 2 = Easy-peel

2 Epidermis texture: 1 = Tender 2 = Average 3 = Tough

2 Thickness of pericarp (medium) 2 Thickness of pericarp. Check var. no. 2 2 per correspondence sept 23, 2008 LMC 9-27-2008

1 Anthocyanin in hypocotyl of 2 – 15 mc seedling: 1 = Absent 2 = Present 1 Habit of 3 – 4 week old seedling: 1 = Normal 2 = Compact

8. RESISTANCE TO FRUIT DISORDER

0 = Not Tested 1 = Highly Resistant 2 = Resistant Few Symptoms 3 = Resistance Few Symptom in Number and Size 4 = Moderately Resistance
5 = Intermedia Susceptible 6 = Moderate Susceptible 7 = Susceptible 9 = Highly Susceptible

NOTE If claim of novelty is based wholly or in substantial part upon resistance, trial data should be appended. These should specify the method of testing, the reaction of the applicatoni variety, and reaction of well-known check varieties grown in the trial (identified by name).

0 Blossom end rot	0 Catface	0 Fruit pox	0 Zippering
0 Blotchy ripening	0 Cracking, concentric	0 Gold fleck	___ Other (specify) N/A
0 Bursting	0 Cracking, radial	0 Graywall	

9. DISEASE AND PEST REACTION

0 = Not Tested 1 = Highly Resistant 2 = Resistant Few Symptoms 3 = Resistance Few Lessions in Number and Size 4 = Moderately Resistance
5 = Intermedia Susceptible 6 = Moderate Susceptible 7 = Susceptible 9 = Highly Susceptible

NOTE If claim of novelty is based wholly or in substantial part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the applicatoni variety, and reaction of well-known check varieties grown in the trial (identified by name).

Viral Diseases:

0 Cucumber mosaic	0 Tobacco mosaic, Race 0	0 Tobacco mosaic, Race2[2]
0 Curly top	0 Tobacco mosaic, Race 1	0 Tomato spotted wilt
0 Potato-Y virus	0 Tobacco mosaic, Race 2	0 Tomato yellows
0 Blotchy ripening	0 Cracking, concentric	0 Gold fleck

___ Other virus (specify) N/A

Bacterial Diseases:

0 Bacterial canker (*Corynebacterium michiganense*)	0 Bacterial spot (*Xanthomonas vesicatorium*)
0 Bacterial soft rot (*Erwinia corotovora*)	0 Bacterial wilt (*Pseudomonas solanacearum*)
0 Bacterial speck (*Pseudomonas tomato*)	0 Other bacterial disease (specify) N/A

Fungal Diseases:

0 Anthracnose (*Colletotrichum* spp.)	0 Leaf mold, Race 1 (*Cladosporium fulvum*)
0 Brown root rot or corky root (*Pyrenochaeta lycopersici*)	0 Leaf mold, Race 2 (*Cladosporium fulvum*)
0 Collar rot or stem canker (*Alternaria solani*)	0 Leaf mold, Race 3 (*Cladosporium fulvum*)
0 Early blight defoliation (*Alternaria solani*)	0 Leaf mold, other races (specify) ___
0 Fusarium wilt, Race 1 (*F. oxysporum f. lycopersici*)	0 Nailhead spot (*Alternaria tomato*)
0 Fusarium wilt, Race 2 (*F. oxysporum f. lycopersici*)	0 Seporia leafspot (*S. lycopersici*)
0 Fusarium wilt, Race 3 (*F. oxysporum f. lycopersici*)	0 Target leafspot (*Corynespora casiicola*)
0 Gray leaf spot (*Stemphylium spp.*)	0 Verticillium wilt, Race 1 (*V. albo-atrum*)
0 Late blight, Race 0 (*Phytophthora infestans*)	0 Verticillium wilt Race 2
0 Late blight, Race 1	___ Other fungal disease (specify) N/A

Insects and Pests:

0 Colorado potato beetle (*Leptinotarsa decemlineata*)	0 Tomato hornworm (*Manduca quinquemaculata*)
0 Southern root knot nematode (*Meloidogyne incognita*)	0 Tomato fruitworm (*Heliothis zea*)
0 Spider mites (*Tetranychus* spp.)	0 Whitefly (*Trialeurodes vaporariorum*)
0 Sugar beet army worm (*Spodoptera exigual*)	___ Other (specify) N/A
0 Tobacco flea beetle (*Epitrix hirtipennis*)	

Pollutants:

0 Ozone 0 Sulfur dioxide ___ Other (specify) N/A

10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS Suggested test methods may be found in "Tomato Products", 5th ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at lease one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

	Submitted Variety	Check Variety	Check Variety	Check Variety
pH	4.32			
Titratable acidity, as % citric	~~0.354~~ 0.326	0.354		
Total solids (dry matter, seeds and skin removed)	~~5.17~~ 4.34	5.17		
Soluble solids as °Brix	~~4.36~~ 3.76 %	4.36		

Per new information provided 4-25-2008

11. PHENOLOGY Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculatoin hear _____°C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

LMC 4-27-2008

	Application Variety	Check Variety	Check Variety	Check Variety
Seeding to 50% flow (1 open on 50% of plants)	25 days			
Seed to once over harvest (if applicable)	N/A			

1 Fruiting season: 1 = Long ('Marglobe') 2 = Medium ('Westover') 3 = Short, concentrated ('VF 145') 4 = Very concentrated ('UC 82')

3 Relative maturity in areas tested: 1 = Early 2 = Medium early 3 = Medium 4 = Medium late 5 = Late 6 = Variable
(If relative maturity is known to differ by location or environment, please explain on separate sheet)

12. ADAPTATION If more that one category applies, list all in rank order.

1 Culture: 1 = Field 2 = Greenhouse

1 2 - - Principle use(s): 1 = Home garden 2 = Fresh market 3 = Whole-pack canning 4 = Concentrated products

5 = Other (specify) _____

1 Machine harvest: 1 = Not adapted 2 = Adapted

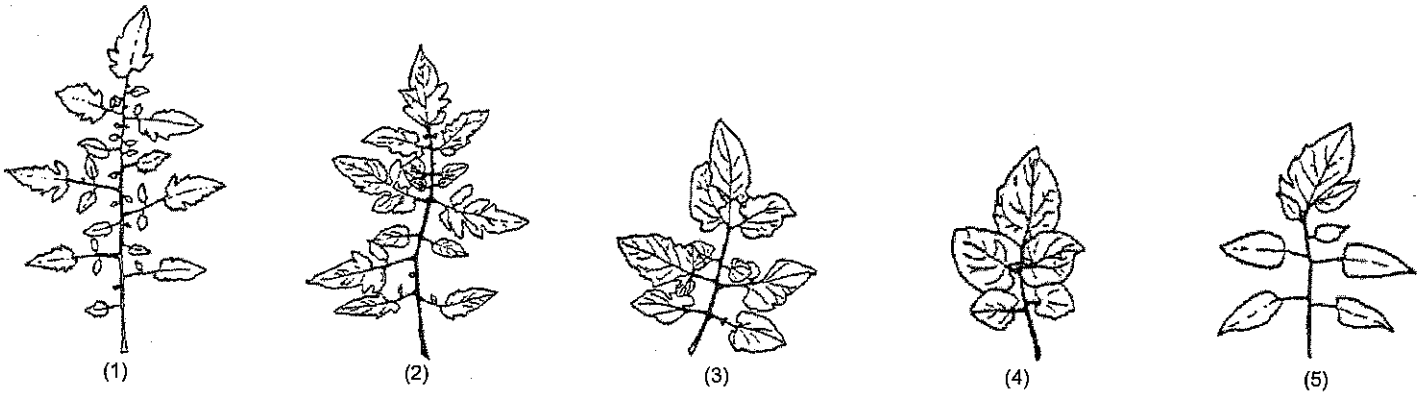
4 - - - Regions to which adaptation has been demonstrated:

1 = Northeast 2 = Mid Atlantic 3 = Southeast 4 = Florida 5 = Great Plains
6 = South-central 7 = Intermountain West 8 = Northwest 9 = California: Sacramento and Upper San Joaquin Valley
10 = California: Coastal Areas 11 = California: Southern San Joaquin Valley & deserts

ILLUSTRATIONS OF TOMATO LEAF AND FRUIT CHARACTERISTICS

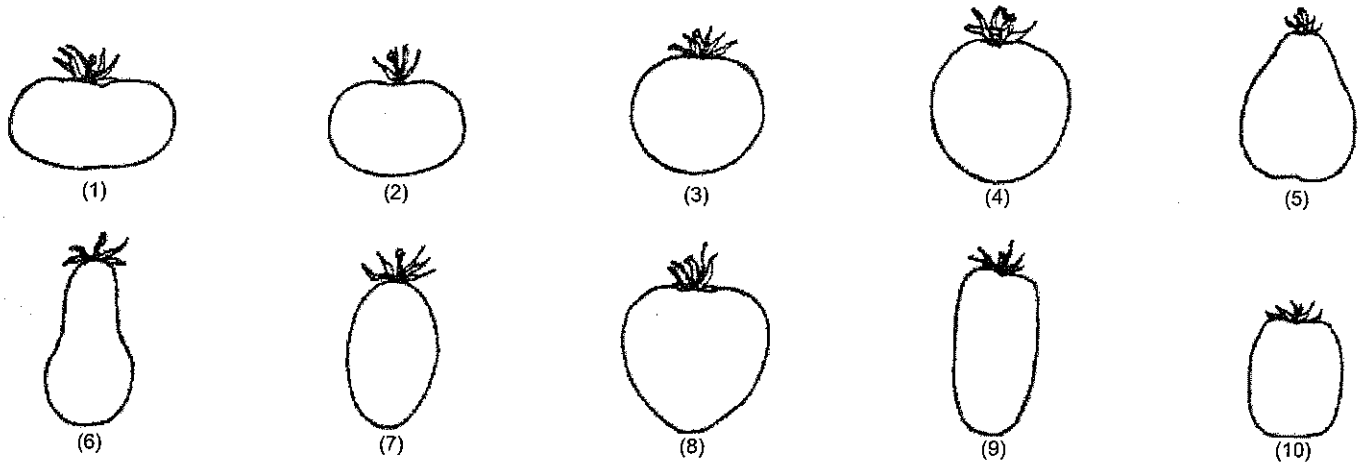
4. LEAF

Morphology:

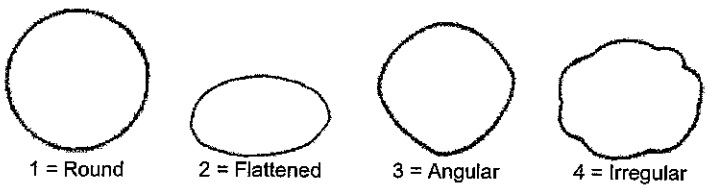


7. FRUIT

Typical fruit shape:

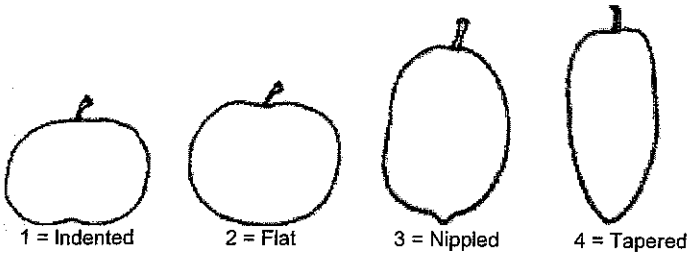


Shape of transverse section:

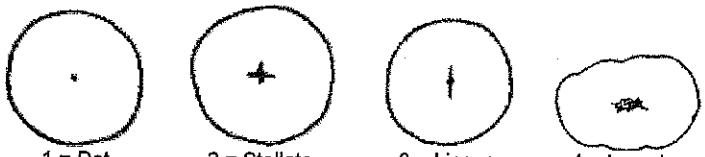


Shape of stem end:

Shape of blossom end:



Shape of pistil scar:



REFERENCES

Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition.

Ware, G.W. & J.P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. Chapter 30, pp. 451-473, "Tomatoes".

Warnock, S.J. 1978. Using Tomato Heat Units. Leaflet No. 6, Campbell Institue for Agricultural Research, Camden, NJ. 10 p.

Webb, R.E., T.H. Barksdale, & A.K. Stoner, 1973. "Tomatoes", pp. 344-361, in: Nelson, R.R. (Ed.), Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.

Young, P.A. & J.W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698..

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Seminis Vegetable Seeds, Inc.	XP 01429864	PICUS
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
2700 Camino del Sol Oxnard, California 93030	(805) 647-1572	(805) 918-2545
	7. PVPO NUMBER #200800039	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☑ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☑ **YES** ☐ **NO**

10. Is the applicant the original owner? ☑ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

The variety named in this application was developed by the Seminis Vegetable Seeds, Inc., employee (breeder) identified below. By agreement between the employee and Seminis Vegetable Seeds, Inc., all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such an invention, discovery, or development are retained by the employee.

Employee (Breeder): Charles W. Fowler

Site Location: Naples, FL

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Seminis Vegetable Seeds, Inc.	2700 Camino del Sol Oxnard, CA 93030	XP 01429864 **VARIETY NAME** PICUS
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS** *(Street and No. or RD No., City, State, and Zip Code and Country)*	**FOR OFFICIAL USE ONLY**
Carol L. Miller	~~2700 Camino del Sol~~ 37437 State Hwy 16 ~~Oxnard, CA 93030~~ Woodland, CA 95695	**PVPO NUMBER** #200800039

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Carol L Miller
Signature

28-Nov-07
Date